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I am submitting herewith a dissertation written by Kiley Elizabeth Winston entitled "Unintentional Injury Content Assessment in Undergraduate Personal Health and Wellness Courses." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Health and Human Sciences.

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UNINTENTIONAL INJURY CONTENT ASSESSMENT IN UNDERGRADUATE PERSONAL HEALTH AND WELLNESS COURSES

A Dissertation

Presented for the Doctor of Philosophy

Degree

The University of Tennessee, Knoxville

Kiley Elizabeth Winston

May 2010

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DEDICATION PAGE

This dissertation is dedicated to my parents, Jim and Joanne Winston. Thank you so very much for your love and support. You have believed in me even when I did not believe in myself. Thank you for your unending prayers and positive words of wisdom.

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ABSTRACT

The purpose of this research study was to describe course content on unintentional injuries in undergraduate personal health and wellness courses at four year public and private colleges and universities identified by the *Eta Sigma Gamma* directory in the United States. An instrument was created, validated and tested for reliability, and used to assess course content areas related to unintentional injuries in undergraduate personal health and wellness courses. The sample for the study included 106 participants (N=106) from public and private colleges and universities in 36 states. Chi-square analysis, ANOVA, factor analysis, and MANOVA tests were used to determine if significant differences existed in course content areas based on selected demographic characteristics.

Results indicated that college and university faculty members report teaching about unintentional injuries. Findings indicated that significant differences do exist in unintentional injury course content areas. The top five content areas identified by faculty members include water-related injuries, firearm safety, motorcycle injuries, motor vehicle passenger safety, and motor vehicle impaired driving. Factor analysis results revealed that unintentional injury course content areas can be categorized into three groups: personal content, motor vehicle content, and injury content. The level of statistical significance was set at 0.05.

INDEX WORDS: Unintentional Injuries, Personal Health Courses, Injury Instrument

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CHAPTER 1

INTRODUCTION TO THE RESEARCH STUDY

Introduction

The Centers for Disease Control and Prevention (CDC) considers colleges and universities as important settings for conveying health prevention and education services. More than 17.5 million students are currently enrolled in the nation's 3,600 colleges and universities (National Center for Education Statistics, 2005). Since unintentional injuries are the leading cause of death in young adults of college age (15 to 34 years), it is important for the faculty of these colleges and universities to develop expertise and available resources for unintentional injury prevention (Centers for Disease Control, 2004; Association of Schools of Public Health, 2006).

According to the American College Health Association (2004), the mission of higher education administration should be student learning. Health promotion and education methods should serve this mission by supporting students with safe and healthy environments (American College Health Association, 2004). Programs, curricula and coursework that assist university staff, faculty, and health services departments need to be designed to augment and address concerns that affect a student's health status and the academic process. Although previous studies have examined health risk behaviors in college students, few studies have examined how content on unintentional injuries is addressed within college and university health courses (American College Health Association, 2004).

Statement of the Problem

Unintentional injuries are the leading cause of death among persons aged 1 to 65 years (Centers for Disease Control, 2004). In 2004, 16,989 young adults aged 10-24 years died from an unintentional injury (Centers for Disease Control, 2004). There is little evidence of concerted efforts made by college and university faculty to inform and educate today's college students about the hazards and dangers to their personal health and wellness. This study explores the content of undergraduate personal health and wellness courses within four year public and private universities and colleges.

A directory of colleges and universities offering undergraduate programs in health education and courses in personal health and wellness has been published by the *Eta Sigma Gamma* organization (Eta Sigma Gamma, 2007). This directory reveals over 223 programs in the United States. The prevalence of unintentional injuries has been reported by leading organizations including the Centers for Disease Control and Prevention and the National Highway Traffic Safety Administration however; information regarding course content areas pertaining to unintentional injuries in personal health and wellness courses is limited.

Purpose of the Research Study

The purpose of this study was to investigate and profile course content on unintentional injuries in undergraduate personal health and wellness courses at four year public and private colleges and universities identified by the *Eta Sigma Gamma* directory for the United States.

Research Objectives

1. To develop an instrument that reliably and validly measures the construct of personal health and wellness course content as determined by college and university faculty.
2. To collect reliable data that reports the course content of unintentional injuries in undergraduate personal health and wellness courses.
3. To accurately describe the unintentional injury content presented in undergraduate personal health and wellness courses in higher education institutions that are listed in the *Eta Sigma Gamma* directory for the United States.

Research Questions

1. Which undergraduate personal health and wellness course content areas related to unintentional injuries that are taught in four year public and private colleges and universities?
2. Do content areas related to unintentional injuries differ significantly based on demographic characteristics?
3. Does classroom delivery for teaching unintentional injury content areas in undergraduate personal health and wellness courses differ significantly based on demographic characteristics?
4. Does the perception of "importance" for teaching content on unintentional injuries differ significantly based on demographic characteristics?
5. Does the perception of teaching unintentional injuries differ significantly based upon demographic characteristics?

Significance of the Study

An extensive review of literature revealed a dearth of evidence pertaining to unintentional injury course content within undergraduate personal health and wellness courses. There has been little baseline data that could be utilized by faculty teaching these courses in four year colleges and universities. None of the information available helped professors and others responsible for developing curriculum and course content to deal with the critical safety and health issues related to unintentional injuries. The Centers for Disease Control and Prevention (2004) identified twenty-three topics of unintentional injuries deemed essential for young people. From a national sample, this study investigated exploratory factors of institutional characteristics, job titles of instructors, and the types of courses taught. This study and the information from the subsequent analysis will help provide evidence for needed inclusion of topics for unintentional injuries and will serve as a guide for local instructors and program administrators.

Assumptions

The basic assumptions for this study were as follows:

1. Surveys will be completed and returned by professors, adjunct faculty, instructors or lecturers who teach undergraduate personal health and wellness courses.
2. Participant's self-reported responses will reflect undergraduate personal health and wellness courses at four year public and private colleges and universities.
3. The instrument will be valid and reliable.

Delimitations

For the purposes of this study, the following delimitations were made:

1. The study will be delimited to colleges and universities that are identified in the *Eta Sigma Gamma* Directory for the United States that have Bachelor degrees in Health Education or Health Promotion.
2. The population in this study will be delimited to instructors teaching undergraduate personal health and wellness courses at four year public and private colleges and universities.

Limitations

For the purposes of this study, the following limitations were:

1. The results of the study are limited to the population studied and cannot be generalized.
2. The responses to the instrument were self-reported by those teaching personal health and wellness courses.

Definition of Terms

The following terms were offered to promote a better understanding of the terminology used for the study:

Unintentional Injury: An injury which is judged to have occurred without anyone intending that harm be done (Rice, MacKenzie & Associates, 1989).

Eta Sigma Gamma: The National Health Education Honorary. The mission of *Eta Sigma Gamma* is to promote the discipline of health education by elevating the standards,

ideals, competence and ethics of professionally prepared men and women in Health Education (Eta Sigma Gamma, 2007).

Faculty: As operationally defined for the purposes of this study, faculty is defined as those individuals teaching at a college or university. This includes professors, adjunct professors, department heads and coordinators, instructors, graduate teaching assistants and graduate teaching associates.

Injury Prevention: As operationally defined for the purposes of this study, injury prevention is defined as efforts used to reduce the severity of bodily injuries caused by external mechanisms before they occur. Additionally, injury prevention is defined as teaching various topics related to unintentional injuries.

Summary

The purpose of this study was to investigate and profile course content on unintentional injuries in undergraduate personal health and wellness courses at four year public and private colleges and universities in the United States. The significance of this study, assumptions, limitations, delimitations, definition of terms, research questions, and objectives were presented in the chapter. In Chapter II a review of literature related to health risk behaviors, college students and unintentional injuries and the social cognitive theory will be presented.

CHAPTER II

REVIEW OF RELATED LITERATURE

The purpose of this study was to profile course content areas on unintentional injuries in undergraduate personal health and wellness courses at four year public and private colleges and universities identified by the *Eta Sigma Gamma* directory for the United States.

Background

The information on how unintentional injuries are addressed within undergraduate personal health and wellness courses is helpful in the prevention of unintentional injuries among young adults. This chapter will provide information concerning the prevalence of unintentional injuries, unintentional injuries within the college population and works similar in methodology, and the supporting theory.

Unintentional Injuries

In 2002, unintentional injuries accounted for more than 106,000 deaths in the United States and accounted for more than 27 million visits to the emergency department (CDC, 2004). Unintentional injuries continue to be the fourth leading cause of death in the United States (CDC, 2004). The consequences associated with injuries account for 30% of all lost years of life before 65 years of age; this exceeds the years of productive life lost from stroke, heart disease and cancer combined (CDC, 2006).

Whether by intentional or unintentional means, an injury exacts an enormous toll on individuals, families, worksites, and communities (Gielen, Sleet, & DiClemente, 2006). The CDC reports that injuries claimed more potential years of life lost prematurely

before age 65 than any other cause of death (CDC, 2004). Studies showed that in 2002, 81% of all injury deaths were due to five mechanisms: motor vehicle traffic (27%), firearms (19%), poisonings (16%), falls (11%), and suffocation (8%) (CDC, 2004). More than 160,000 people die each year from injury including approximately: 44,000 from motor vehicle crashes; 40,000 from poisonings, falls, drownings, fires and burns; 31,000 from suicide; and 17,000 from homicide (CDC, 2004).

The reduction of morbidity and mortality due to unintentional injuries was a goal of Healthy People 2010 (Phelan, Falimirski, Simpson, Czinner & Hargarten, 2007). Baker, O'Neil, & Ginsburg (1992) reported that because injuries disproportionately affect young, the impact that injuries have on years of potential life lost is significant. The CDC (1999) reported that one death out of 17 in the United States was the result of an injury and of these deaths, 63% were unintentional injuries and 34% were intentional injuries (CDC, 1999). Schappert (1997) found that millions of people are incapacitated by emergencies caused by unintentional injuries and suffer from disabilities caused by an injury.

Although a significant number of interventions have been implemented to reduce injuries, injuries still exact a large toll on communities, families, individuals, and work environments (Gielen, Sleet & DiClemete, 2006). Despite the number of interventions, in 2002 more than 160,000 injury-related fatalities occurred (CDC, 2005). In addition, in 2003 there were more than 30 million nonfatal incidents that required care from emergency departments (CDC, 2005).

In 1997, Fingerhut & Warner analyzed U.S. data and found that unintentional death rates were higher in non-metropolitan counties than in metropolitan counties and that injury death rates were higher for males when compared to females, except during infancy. Data analysis also found that for infants and children under the age of fifteen, motor vehicle crashes, fires, drownings, suffocations and firearms accounted for 80 percent of all injury deaths (Fingerhut & Warner, 1997). Among those individuals over the age of seventy-five, three out of five hospitalizations were due to fractures. Because of the mortality related to unintentional injuries, the Centers for Disease Control and Prevention (CDC) has recommended that health communication be used to influence injury-related behaviors. Among teens and young adults more attention needs to be given to injury-related behaviors. In personal health and wellness courses, attention should be directed to the causes of unintentional injuries and injury prevention.

In regard to injury prevention, DeJoy (1999) found that young adults were at an increased risk of injury. Similarly, Jonah (1997) found that thrill and adventure seeking have been associated with risky driving behaviors. Goldhaber and deTurk (1989) found that male high school students were more likely to dive in shallow water after a sign was posted at the pool prohibiting such behavior. According to Gielen, Sleet & DiClemente (2006), future research related to injury prevention will depend upon health communication.

Understanding both the breadth and impact of unintentional injuries is integral to prevention methods and efforts. Although research on unintentional injuries and college health courses is limited, the following research areas will be addressed for unintentional

injuries. These areas include alcohol use and motor vehicle crashes, safety belt usage, motorcycle and bicycle helmet usage.

Motor Vehicle Crashes

According to Healthy People 2010, motor vehicle crashes remain a major public health concern (CDC, 2004). Motor vehicle crashes are the leading cause of death for individuals in the United States ages 5 to 29 years (CDC, 2004). In 1998, approximately 41,471 individuals died in motor vehicle crashes; thirty-eight percent of these deaths were attributed to alcohol consumption (National Highway Traffic Safety Administration, 1998).

Studies indicate that drinking among college students has been traditionally regarded as part of the college experience regardless of age and legal status (Black, Ausherman, Kandakai, Lam & Jurjevic, 2004; Wechsler & Kuo, 2003). Approximately 90% of college students reported consuming alcohol at least once a year (O'Malley & Johnson, 2002; Svenson, Jarvis & Campbell, 1994) with 40 to 47% of the students engaging in binge drinking (Helmkamp, et al, 2003; Keeling, 2002). Binge drinking is defined for men as five or more consecutive drinks; and for women as four or more drinks in one sitting within the past two weeks (Helmkamp et al., 2003; Keeling, 2002).

According to Quinlan, Brewer, Sleet & Dellinger (2000) an Alcohol Impaired Driver (AID) has the capacity to not only to kill one person, but many others. In 2002, 44 percent of those individuals who were killed in a traffic crash involving a drinking driver with a Blood Alcohol Content (BAC) of 0.01 percent or higher were people other than the drinking driver (Quinlan et al., 2000). From 1985 to 1996, of the 5,555 children

under the age of fifteen who were killed in motor vehicle crashes, two-thirds were passengers riding in the same car as the drinking driver (Quinlan et al., 2000).

The consequences related to alcohol consumption vary and can be attributed to a variety of factors. Wechsler, Lee, Nelson & Kuo (2002) found that college students who engage in binge drinking behaviors are two to five times more likely to drive a motor vehicle after drinking. Another study indicated that 60% of college students who consume alcohol reported driving while intoxicated at least once a year and that 30% reported driving drunk three to ten times per year (Thomas & Seibold, 1995).

When compared to their non-drinking counterparts, college students who consume alcohol are more likely to get into trouble with the law and get hurt and/or injured (Wechsler, Lee, & Nelson, 2003; Wechsler, Lee, Kuo & Lee, 2000). The motor vehicle death rate per 100,000 people is highest among individuals aged 16 to 24 years and those 75 years and older (National Highway Traffic Administration, 1998).

Driver simulation and road course studies have revealed that when Blood Alcohol Content (BAC) is over 0.05 percent, the result is poorer driving performance at slower speeds, poor parking performance, and steering inaccuracy (Finnegan & Hammersley, 1992; Hindmarch, Bhatti, Starmer, Mascord, Kerr, & Sherwood, 1992; Starmer, 1989). Zador (1991) found that for each 0.02 increase in a drivers' Blood Alcohol Content (BAC), the driver's risk of being in a single-vehicle motor vehicle crash doubled. The same study also found that for all age groups, the likelihood of a fatally injured driver was nine times greater for a BAC of 0.05 to 0.09 percent than for an individual whose BAC was zero.

Studies on alcohol related motor vehicle crashes reveals that seventy-seven percent of fatal alcohol related traffic crashes occur between 6:00 PM and 6:00 AM; more alcohol-related crashes occur on Saturday (24 percent) than any other day of the week (National Highway Traffic Safety Administration, 2003).

Research on alcohol related motor vehicle fatalities indicate that drivers between the ages of sixteen and twenty and those aged twenty-one to forty-five are disproportionately likely to be involved in alcohol related fatal motor vehicle crashes. Most drivers in alcohol-related fatal crashes are males: seventy-three percent (National Highway Traffic Safety Administration, 2003).

Studies indicate that there are many demands on individuals that must be met before safely operating a motor vehicle. McKnight and Hundt (1971) identified as many as fifteen hundred task requirements for a driver of a motor vehicle. These tasks were in addition to the many tasks placed upon individuals to safely operate a motor vehicle. Lonero, Clinton, Brock, Wilde, Laurie and Black (1995) found that the cognitive ability of the driver is important to the individual's sensory, mental and psychomotor functions which are critical to safe motor vehicle operation. Lonero and Clinton (1998) found that broader views related to motor vehicle safety were needed in order for behavior change to occur.

The behavior of driving while under the influence of alcohol is shaped by individual behavior, motivation, social, environmental, organization and economic factors (Gielen, Sleet & DiClemente, 2006). Interventions that use only one approach to change the behaviors of Alcohol Induced Drivers (AIDS) have proven to have limited success (Sleet, Wagenaar & Waller, 1989; Howat, Sleet, Elder & Maycock, 2004).

Interventions dealing with alcohol and motor vehicle use need to be long-term and cumulative. Evidence suggests that three types of interventions have been shown to reduce alcohol-impaired driving behaviors. These interventions include: individually oriented interventions to change knowledge and behaviors associated with drinking and driving, environmental interventions to reduce alcohol availability and deter drinking and driving behaviors, and comprehensive community interventions.

With regards to the college environment and alcohol interventions, Weitzman, Nelson, Lee and Wechsler (2004) evaluated the impact of college and community partnerships and the implementation of environmentally based interventions to reduce the drinking related behaviors of college students. Interventions included the registration of kegs, mandatory responsible beverage services, increased community police enforcement, substance-free residence halls and media efforts. Results indicated that with these interventions, significant reductions were achieved in binge drinking, frequent drinking, frequent intoxication, driving after drinking, and alcohol related injuries (Weitzman et al., 2004).

Safety Belt Usage

Motor vehicle accidents are the leading cause of unintentional injuries in college students (CDC, 2004). In 1995, the Centers for Disease Control and Prevention conducted the National College Health Risk Behavior Survey (NCHRBS) and found that only 10.2% of college students rarely or never used safety belts when riding in a car that was driven by someone else (CDC, 1995). The study also found that male students (13%) were significantly more likely to rarely or never use safety belts when riding in a car driven by someone else when compared to their female counterparts (7.8%). Of those

students surveyed who had driven a car (96.3%), 9.2% reported rarely or never using safety belts when driving the car (CDC, 1995).

When safety belts are worn correctly, they are the most effective way for individuals to reduce the risk of death and serious injuries due to motor vehicle crashes on public roads (National Highway Traffic Safety Administration (NHTSA), 1998b).

Motorcycle and Bicycle Helmet Use

The NCHRBS reported that 17% of college students nationwide had ridden on a motorcycle. Of those students who had ridden on a motorcycle, 34% of them rarely or never used a motorcycle helmet (CDC, 1995). Studies on motorcycle safety indicated that motorcyclists were 34 times more likely to die when in a traffic accident (NHTSA, 2005). In regards to bicycle helmet use and college students, 57.1% of college students had ridden a bicycle in the past year (CDC, 1995). Of those college students, 87.1% rarely or never wore a helmet when riding a bicycle (CDC, 1995). Statistics regarding bicycle fatalities indicated that, 784 bicyclists died in 2005, accounting for 2% of all traffic fatalities (NHTSA, 2005).

Head injuries are considered the most serious type of injury that is sustained by bicyclists (CDC, 2004). In 1998, 761 bicyclists were killed in crashes involving motor vehicles and an additional 53,000 were injured in traffic crashes (CDC, 2004). Also, statistics indicated that motorcyclists are at an increased risk for sustained head injuries (NHTSA, 1998a). Research shows that the number of deaths on a motorcycle per mile traveled is about 16 times the number of deaths from automobile accidents (National Highway Traffic Safety Administration, 1998a). According to the National Highway Traffic Safety Administration (1998a), wearing a motorcycle helmet reduces the chances

of brain injury by 67%. A rider who is unhelmeted is 40% more likely to suffer from a fatal head injury when compared to a helmeted rider (National Highway Traffic Safety Administration, 1998b).

Sports and Recreational Injuries

In the United States alone, it is estimated that over 30 million children and young adults participate in organized sports annually (Centers for Disease Control and Prevention, 2002). Danseco, Miller and Spicer (2000) found that although the majority of sports and recreational injuries among children and young adults are not severe enough to require hospitalizations, they do not accurately reflect the economic impact of injuries from direct and indirect medical costs.

Data gathered from the Centers for Disease Control and Prevention, National Electronic Injury Surveillance System showed that between July 2000 and June 2001 approximately 4 million non-fatal sports and recreational injuries were treated in Emergency Departments through the United States. Sport and recreational injuries also made up 16 percent of all injuries reported to Emergency Departments (Centers for Disease Control and Prevention, 2000).

When considering age and gender, males aged ten to nineteen were more likely to be injured by football, basketball and bicycle related injuries whereas basketball produced the most amount of injuries for females in the same age bracket (Centers for Disease Control and Prevention, 2000). According to the CDC (2000), approximately 715,000 injuries occur annually within the school setting along. Injuries have also been reported by adolescents and young adults as the leading reason that they discontinue participating in sports.

Despite the magnitude of sports and recreational injuries, there has been little academic research to understand and address behavioral causes and prevention measures. Research conducted on unintentional injuries related to motor vehicle crashes, seat belt usage, bicycle and motorcycle helmet usage, and sports and recreation injuries have been topics of concern for the American College Health Associations as evident by their National College Health Assessment profile.

Research Similar in Methodology

The American College Health Association (ACHA) was created in 1920 to provide leadership to the field of college health, including providing research, services, administration, advocacy and communication to campus communities (American College Health Association, 2004). Currently ACHA membership has grown from 40 member colleges and universities to over 900 public and private colleges and universities (American College Health Association, 2004). The American College Health Association also serves more than 2,400 college health care directors, nurses, health educators, mental health providers, pharmacists and students.

In 1998, a work group was initiated by the American College Health Association to develop a National College Health Assessment designed to collect information about the health behaviors, perceptions and health indicators of college students. In 1995 the Centers for Disease Control and Prevention collected data from college students in the National College Health Risk Behavior Survey.

Since comparable surveillance data did not exist, the American College Health Association started a surveillance system to provide insight into campus communities (American Public Health Association, 2005). Data gathered by the American College

Health Association included information pertaining to unintentional injuries. Currently, the survey sponsored by the American College Health Association is the only instrument that samples students attending colleges and universities on risk behaviors related to unintentional injuries. Theory based research related to unintentional injuries is sparse. According to Gielen, Sleet, and DiClemente (2006) there is a lack of theory-based studies related to injury prevention. For the purpose of this study, the social cognitive theory was used.

Social Cognitive Theory

According to the Trifiletti, Gielen, Sleet & Hopkins (2004), two committees formed by the Institute of Medicine published literature reviews on the social and behavioral risk factors and behavior change mechanisms for the leading causes of mortality (Institute of Medicine, 2000; 2001). These committees found support for the application of theory to identify the determinants of disease and effective interventions. However, neither report conducted by the Institute of Medicine addressed the use of theory for unintentional injury prevention (Institute of Medicine, 2000; 2001).

The Social Cognitive Theory (SCT) provides a comprehensive explanation of behavior while integrating both cognitive and operant behavioral theories. While Social Cognitive Theory has become the prominent theory used in the development and implementation of health education programs, evaluations, and interventions, it has only been applied to few studies on injury prevention (Gielen, Sleet, & DiClemente, 2006).

In the past, the term *social learning theory* was used to describe a range of concepts pertaining to behaviors and social interactions (Gielen, Sleet & DiClemente, 2006). In 1986, Bandura consolidated ideas pertaining to social interactions and behavior

under a new term known as social cognitive theory. Social Cognitive Theory (SCT), similar to Social Learning Theory, emphasizes the social influences on behavior. It concentrates on the social and cognitive mediation of behavior, providing a comprehensive conceptualization of the relationship that exists between the environment, behavior and cognition.

The main concept in Social Cognitive Theory is known as reciprocal determinism or triadic reciprocity. This means that the environment, behavior and person are dynamically related. According to SCT, the environment represents all external social and physical factors; behavior refers to all actions intentional or unintentional; person refers to the individual cognitive, affective, or biological self or being (Gielen, Sleet & DiClemente, 2006). In SCT, the environment influences the behavior by providing context, reinforcement and opportunity, all of which are possessed by the person. Behavior influences the environment by action and according to SCT, this experience provides information that can be processed and stored both cognitively and emotionally. The constant and dynamic reciprocity of the three components: the behavior, environments and person makes them integral to one another. A change in one component indicates a change in the other.

Constructs of Social Cognitive Theory

The broad concepts of reciprocal determinism bring together important constructs concerning the environment, behavior and the person. Bandura (1986) and Baranowski, Perry and Parcel (2002) provide a brief overview of the theory. One of the main concepts associated with Social Cognitive Theory pertains to the environment. According to social cognitive theory, the environment sets the stage in which behavior is performed. The

environment can include those physical things such as resources, equipment, and facilities and also policies, programs and practices that influence an individual's behavior (Bandura, 1986; Baranowski, Perry & Parcel, 2002). According to social cognitive theory, the environment provides a space for both opportunity and reinforcement in regards to behavior.

According to social cognitive theory, the environment does not influence everyone's behavior in the same way. People experience environments very differently. How individuals perceive an environment depends on the situation. According to Gielen, Sleet and DiClemente (2006) the situation is a strong influence on how the environment is perceived. In social cognitive theory, reinforcement leads to the likelihood of a behavior occurring. Positive reinforcement increases the likelihood that the behavior will occur again (Gielen, Sleet & DiClemente, 2006). Because reinforcement is complicated by individual cognition and interpretation, the same consequence does not affect each person's behavior to the same extent (Gielen, Sleet & DiClemente, 2006). Thus it is important for researchers to better understand how reinforcement can be used to influence both the proximal social environment and the distal community environment.

Bandura (1962) also found that individuals learned through observation. He found that the learning process occurred through modeling and vicarious reinforcement. People learn from watching others. Observing behaviors performed by others can affect an individual's perceptions about social norms and outcome expectations. The following examples illustrate the use on modeling and observation. Brenner, Simons-Morton, Bhaskar, Revenis, Das and Clements (2003) found that infant car seat use increases when hospital staff requires that the infant's first ride home be in a car seat and that mothers are

more likely to place infants to sleep on their back when they observe hospital staff placing infants on their back (Brink & Simons-Morton., 1989).

Another concept related social cognitive theory is that of behavioral capability. According to the social cognitive theory, behavioral capability refers to knowledge. Knowledge is essential in changing behavior. For a complex behavior to be performed, the individuals must be knowledgeable about the behavior.

Application of Social Cognitive Theory

For the purposes of this study, Social Cognitive Theory can be applied in many ways. The root of Social Cognitive Theory is learning. Learning must take place for a behavior change to occur. This study focuses on course content related to unintentional injuries and classroom delivery format. If the participants in the study identify that course content related to unintentional injuries is being taught within the classroom environment, then it is the learner's responsibility to internalize the lesson.

A concept of Social Cognitive Theory is reciprocal determinism. This component suggests that the environment, the behavior and the person are dynamically related, influencing each other. If the participant in this study identifies teaching course content related to unintentional injuries within the classroom environment, the teaching can directly influence the individual in the environment and the behavior of the student.

The concept of behavioral capability can also be applied to this study. Before students can practice safety and reduce their risk for unintentional injuries, they must first learn what is an unintentional injury. The classroom provides an environment for learning and behavior capability serves as the individual's knowledge base. Behavioral capability implies the practical and useful understanding of knowledge that is essential

for performing a skill or task under a range of practical situations or scenarios (Gielen, Sleet & DiClemente, 2006).

According to social cognitive theory, outcome expectations are the anticipated consequences of human behavior. This is a component of social cognitive theory because it operationalizes those concepts concerning the cognitive expectations of reinforcement (Gielen, Sleet & DiClemente, 2006). Outcome expectations stem from actual and vicarious experiences and can be stored along with an individual's emotions and memories.

The cognitive theory can be applied to health education in many ways. It can be used to determine how individuals attain and use health information (Glanz, 1990). Cognitive theory can also play an essential role in the way in which individuals receive and understand health information. In regards to this research study, cognitive theory can be used to investigate those course content areas and unintentional injuries reported by the participants. According to the theory, the classroom can serve as the environment. If this study determines that the instructor is including unintentional injury content within personal health and wellness courses, then that content could be used to influence student behavior.

Summary

This chapter has discussed research pertaining to select unintentional injuries and unintentional injuries within the college population. A theory was described that was the framework for the study. Chapter III will discuss specific methodology along with the instrumentation chosen for the study.

Chapter III

METHODOLOGY

Chapter III describes the subject selection, study design, data collection, instrumentation, the research methodology, and the data analysis procedures used in the research study. The population for the research study will include four year public and private colleges and universities located in the United States.

Subject Selection

The population for this study was delimited to individuals responding to surveys working at colleges and universities who are identified in the *Eta Sigma Gamma* Directory. *Eta Sigma Gamma* is the National Health Education Honorary organization that collects self-reported information on colleges and universities with both graduate and undergraduate health education programs. For the purposes of this study, the directory was used to identify individuals teaching in undergraduate health education or health promotion programs.

To facilitate faculty recognition, the *Eta Sigma Gamma* directory was used to contact departmental offices to determine the e-mail address of the instructor of the personal health and wellness course prior to survey administration. Participants in the study included professors, adjunct professors, instructors and lecturers who were currently teaching or who have recently taught an undergraduate personal health and wellness course during the 2009 calendar year.

Study Design

For this study, subjects were selected from colleges and universities who were identified in the *Eta Sigma Gamma* Directory. These colleges and universities were selected because of the inclusion of self-reported undergraduate health education or health promotion programs (Eta Sigma Gamma, 2007) throughout the United States. The population was limited to those instructors employed by colleges and universities cited in the *Eta Sigma Gamma* Directory and who were willing to participate in the study.

Data Collection

Prior to the initiation of the study, the University of Tennessee Institutional Review Board (IRB) cleared the study for research involving human subjects in September 2009 (Appendix A).

The online survey link was communicated via e-mail to every university/college department selected for the study and proper participant contact information was obtained, including name and e-mail address. This was done to secure a positive response rate.

Surveys were sent via e-mail to faculty at colleges and universities identified in the *Eta Sigma Gamma* directory. The e-mail solicited participation from the college/university instructors and the link to the online survey was placed in the e-mail. Return of the instrument was considered to be implied consent to participate in the study. Data collection took place from October through November 2009. After the initial e-mail was made soliciting participation, three follow-up e-mails were sent. Sending the survey link to participants four times aided in increasing a response rate.

Instrumentation

A literature review indicated that no valid/or reliable instrument existed to examine how course content areas pertaining to unintentional injuries are addressed in the context of personal health and wellness courses.

The first objective of the research study was to develop a valid and reliable instrument to use in assessing how unintentional injuries are addressed in the context of undergraduate personal health and wellness courses.

The instrument, entitled "*Unintentional Injury Content Assessment in Undergraduate Personal Health and Wellness Courses"* was created after reviewing existing instruments that addressed course content. The instruments reviewed that have been used to assess course content lacked established validity and reliability (Institute of Medicine, 1999). These instruments were used as general course surveys to help health education instructors refine a course (Institute of Medicine, 1999). The process to develop the instrument is described in Figure 1.

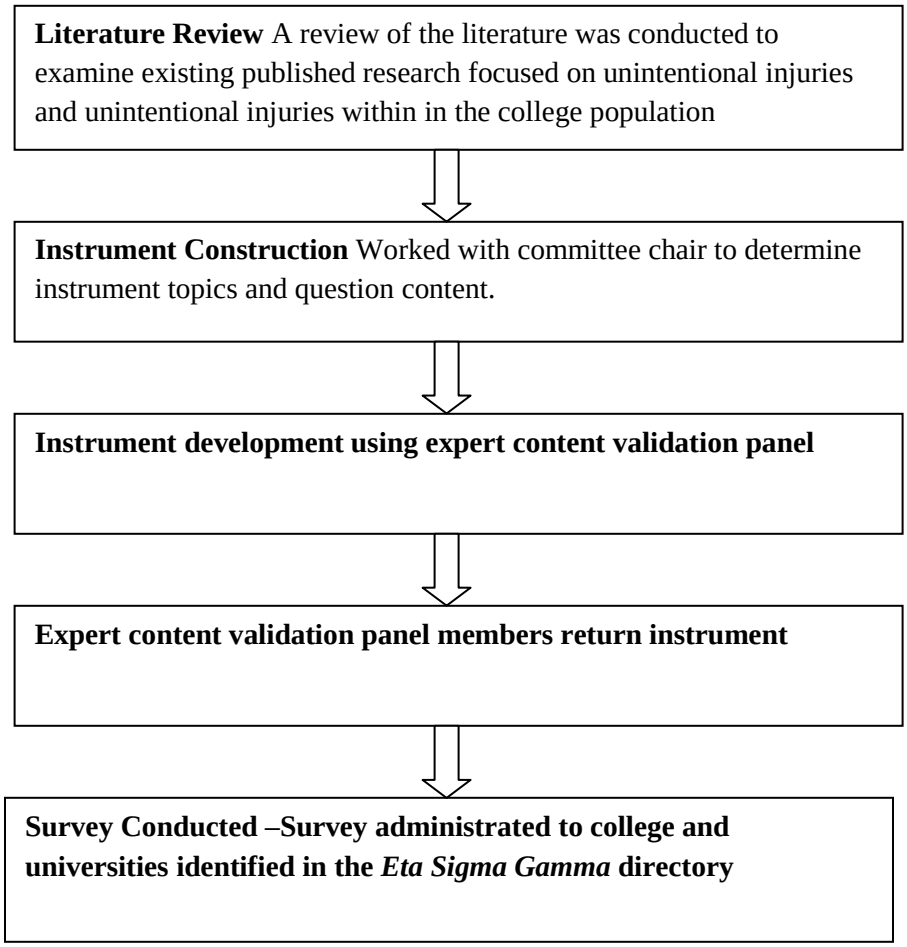

Figure 1: Creation, Validation, and Reliability of Unintentional Injury Content in College Health Courses – Instrument

Expert Content Validation Panel

The first step in instrument development was to create and consult an expert panel about questions to include in the instrument. The panel was also used to assess and modify existing instrument questions. The panel included individuals from the following organizations: the Centers for Disease Control and Prevention, Tennessee State University Department of Health Administration and Health Sciences, Knox County Health Department, Georgia Southern University Department of Health and Human Sciences, and the University of Tennessee Knoxville Center for Safety, Environment and Education.

Members of the expert content validation panel were chosen based on their areas of work, expertise and willingness to participate. Chosen panel members specialize in curriculum and course development, child fatalities, injury prevention research, personal health and wellness courses, health promotion and education, and unintentional injuries. The panel members were asked to review the draft instrument to determine if the instrument was easy to understand, would obtain relevant information about unintentional injuries within undergraduate personal health and wellness courses, and would be appropriate for continued use in the area of course content assessment.

Members of the expert content validation panel were asked to complete a narrative review of the draft instrument and return the reviewed form to the researcher for analysis and establishment of content validity. The instrument, "*Unintentional Injury Content Assessment in Undergraduate Personal Health and Wellness Courses*" is available for review in Appendix D.

Instrument Questions

Demographic questions collected information about the size and type of college and university in which the participant worked (4 year university, 4 year college, public or private). Instructors were asked to indicate if the course is required by the college or university. Questions also included in the instrument asked participants to identify topics related to unintentional injuries that are covered in a personal health and wellness course. These topics included: Bicycle safety, drowning, fire/burn-related injuries, firearm safety, motor vehicle accidents/injuries, motor vehicle passenger safety, motor vehicle child passenger safety, motor vehicle impaired driving, pedestrian safety, personal safety, poisonings, recreational and sports injuries, slips, trips, and falls, water-related injuries and work-related injuries. Also, participants were asked to report the format for teaching these topics, if the course was required or an elective, and the instructor's perspective on unintentional injuries.

Data Analysis

Data were analyzed using the Statistical Package for the Social Sciences (SPSS, version 17.0). A significance level for all analysis was set using a p value less than or equal to 0.05. Descriptive statistics were computed for all open-ended questions. Chi-square analyses were used to determine the significance of associations of ordinal or nominal categories. MANOVA and ANOVA statistical tests were conducted to identify differences in likert type question options on the instrument. A MANOVA statistical test was used when research involves an independent variable with more than one level and more than one dependent variable. A MANOVA statistical test was used to examine the mean differences between groups. An ANOVA statistical test can be used to analyze two

or more levels of independent variables. In addition to these tests, a factor analysis was conducted. To test the reliability of the measures used in the factor analysis a Chronbach's Alpha was determined. Cronbach's Alpha measures the extent to which survey questions correlate with other questions in the same section. Cronbach's Alpha is not a measure of unidimensionality, but a measure of correlation between responses to different questions (Cronbach, 1971). For an item to be considered reliable, a minimum alpha value of .70 is required. Most researchers prefer a Cronbach's Alpha of .80 to retain the item analyzed (Cronbach, 2004; Litwin, 2002). Data analysis by research question is presented in Appendix E.

Summary

This chapter reviewed the creation of the instrument "Unintentional Injury Content Assessment in Undergraduate Personal Health and Wellness Courses." A panel of experts in the fields of health education and promotion, personal health and wellness, and unintentional injuries reviewed the instrument prior to survey administration. An online survey was administered to four year colleges and universities identified in the *Eta Sigma Gamma* Directory offering an undergraduate personal health and wellness courses. Data analysis by research question was also described in this chapter. Chapter IV will present the analysis and interpretation of data.

CHAPTER IV

ANALYSIS AND INTERPRETATION OF DATA

The purpose of this study was to describe course content areas on unintentional injuries in undergraduate personal health and wellness courses at four year public and private colleges and universities identified by the *Eta Sigma Gamma* directory for the United States.

Description of the Subjects

Surveys were sent to faculty members at 223 colleges and universities listed in the *Eta Sigma Gamma Directory*. Out of 223 participants, 144 participants accessed the survey link. Out of these participants, 106 participants were included in the final data set (N=106). These participants gave a sufficient amount of responses for data analysis. Only complete surveys were used in data analysis. A response rate of 47.5 % was calculated. All participants were surveyed in the Fall semester during October and November 2009.

Participants were asked to describe their current position. The sample of 106 participants included 50 professors, 15 instructors, 15 graduate teaching associate/associates, 11 program coordinators, 10 adjunct faculty members and 5 held professor/administrative positions. For data analysis purposes, professors and adjunct professors were grouped together. Graduate teaching associates and instructors were also placed in the same group.

Participants were asked to describe where they were currently employed. The participants responded as follows: 80% (n=85) worked at a four year state college/university, 14.2% (n=15) worked at a four year private college/university, 2.8%

(n=3) worked at 4 year independent religious college/university and 2.8% (n=3) worked at another type of college/university not identified in the survey. Participants represented undergraduate health education programs from 36 states across the United States.

Participants were also asked to identify the size of their respective college/university. The results are presented in Figure 2.

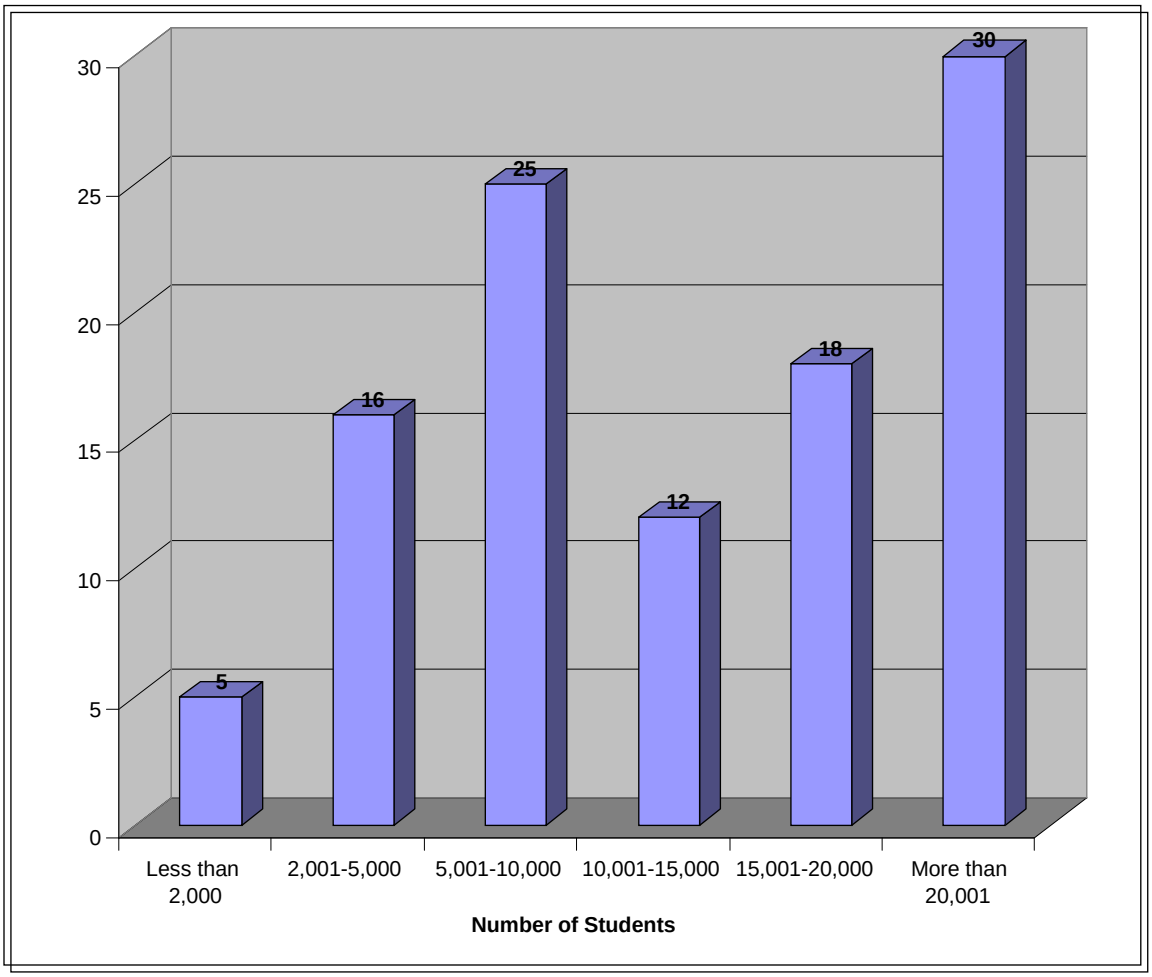

Figure 2: Size of School by Student Population

Research Question 1

1. Which undergraduate personal health and wellness course content areas related to unintentional injuries are taught at four year public and private colleges and universities?

To examine which personal health and wellness course content areas related to unintentional injuries that are taught at four year public and private universities, frequency distributions were used. Table 1 presents the personal health and wellness course content areas addressed by participants teaching at four year public and private universities. This table presents the number of participants who identified as teaching unintentional course content areas. The frequency distribution of course content areas related to unintentional injuries suggest that the top five areas covered by four year public and private universities include: Water-related injuries (n=71), firearm safety (n=70), motorcycle injuries (n=70), motor vehicle child passenger safety (n=67), and motor vehicle impaired driving (n=67). Results indicated that motor vehicle accidents/injuries and sports and recreational injuries less likely to be covered when compared to other content areas. Results indicated that 87.2 percent (n=80) of respondents covered areas not addressed in the survey. The areas not addressed by the survey included contraceptive use, personal health and wellness, nutrition, fitness, psychological health, intentional injuries, drinking and tobacco use.

Table 1: Unintentional Injury Course Content Areas

Course Content Area	Count	n (%)
Other	82	87.2%
Water-Related Injuries	71	75.5%
Firearm Safety	70	74.5%
Motorcycle Injuries	70	74.5%
Motor Vehicle Child Passenger Safety	67	71.3%
Motor Vehicle Impaired Driving (Drugs & Alcohol)	67	71.3%
Pedestrian Safety	67	71.3%
Bicycle Safety	65	69.1%
Motor Vehicle Adult Passenger Safety	64	68.1%
Work-Related Injuries	62	66.0%
Drowning	63	67.0%
Fire/burn Related Injuries	60	63.8%
Slips, Trips, and Falls	60	63.8%
Poisonings	55	58.5%
Recreational & Sports Injuries	41	43.6%
Motor Vehicle Accidents/Injuries	35	37.2%

Research Question 2

2. Do content areas related to unintentional injuries differ significantly based on demographic characteristics?

To analyze unintentional injury course content areas, certain demographic factors were chosen. These demographic factors included school type (public or private), participant title (department chair, professor, adjunct professor, instructor, or graduate teaching associate/assistant), and course type (required or elective). A chi-square analysis was used to determine if significant differences existed between course content areas related to unintentional injuries and demographic factors. Table 2 displays p values for course content areas by school type (public or private).

The results from the chi-square analysis indicated that there was a significant difference in course content areas related to poisoning ($p=0.043$). Results indicate that public schools are significantly more likely to address poisoning when compared to private schools.

To determine if participant title had a significant impact on course content related to unintentional injuries, a chi-square analysis was used. The results are displayed in Table 3.

Results from the chi-square analysis displayed in Table 3 indicated that course content coverage pertaining to bicycle safety ($p=0.043$) significantly differed between instructors, graduate teaching assistants/associates, professors/adjunct professors, and program coordinators. Results indicated that 50% of graduate teaching assistant/associates taught bicycle safety compared to 25% of professors/adjunct professors and 20% of program coordinators.

Table 2: Chi-Square Analysis of Course Content Areas by School Type

Content	**Public**	**Private**	**X^2**	**Df**	**p Value**
Bicycle Safety	26 (33.3%)	3 (18.8%)	1.324	1	0.250
Drowning	29 (37.2%)	2 (12.5%)	3.659	1	0.056
Fire/Burn Related Injuries	31 (39.7%)	3 (18.8%)	2.534	1	0.111
Firearm Safety	21 (26.9%)	3 (18.8%)	0.466	1	0.495
Motorcycle Injuries	21 (26.9%)	3(18.8%)	0.466	1	0.495
Motor Vehicle Accidents/Injuries	48 (61.5%)	11 (68.8%)	0.295	1	0.587
Motor Vehicle Adult Passenger Safety	26 (33.3%)	4 (25.0%)	0.424	1	0.515
Motor Vehicle Child Passenger Safety	24 (30.8%)	3 (18.8%)	0.937	1	0.333
Motor Vehicle Impaired Driving	43 (55.1%)	8 (50.0%)	0.141	1	0.708
Pedestrian Safety	24 (30.8%)	3 (18.8%)	0.937	1	0.333
Personal Safety	50 (64.1%)	14 (87.5%)	3.345	1	0.067
Poisonings	36 (46.2%)	3 (18.8%)	4.107	1	**0.043***
Recreational and Sports Injuries	44 (56.4%)	9 (56.3%)	0.000	1	0.991
Slips, Trips, and Falls	28 (35.9%)	6 (37.5%)	0.015	1	0.903
Water Related Injuries	19 (24.4%)	4 (25.0%)	0.003	1	0.957
Work Related Injuries	27 (34.6%)	5 (31.3%)	0.067	1	0.796

*$p < 0.05$

Data analysis also revealed that course content related to fire/burn related injuries (p=0.043) and work-related injuries (p=0.027) significantly differed between instructors, graduate teaching assistants/associates, professors/adjunct professors, and program coordinators. Results indicated that 60% of program coordinators taught about fire/burn related injuries compared to 42.3% of instructors/graduate teaching assistant/associates and 26.4% of professors/adjunct professors. In regard to work-related injuries, 53.3% of program coordinators reported teaching the course content area compared to 46.2% of instructors/graduate teaching assistant/associates and 22.6% of professors/adjunct professors.

Chi-square analysis also indicated that course content related to poisoning (p=0.039) significantly differed between course instructors. Results indicated that 60% of program coordinators reported teaching about poisoning compared to 53.8% of instructors/graduate teaching assistant/associates and 30.2% of professors/adjunct professors.

To determine if course type (required or elective) had a significant impact on course content related to unintentional injuries, a chi-square analysis was used. The results are displayed in Table 4.

Chi-square results presented in Table 4 revealed that an elective courses was significantly more likely to cover firearm safety (p=0.005), motorcycle injuries (p=0.005), and work-related injuries (p=0.037).

Table 3: Chi-Square Analysis of Course Content Areas by Instructor Title

Content	Program Coordinator	Professor and Adjunct Professor	Instructor and Graduate Assistant/Associate	X^2	Df	p Value
Bicycle Safety	3 (20.0%)	13 (25.0%)	13 (50%)	6.290	2	**0.043***
Drowning	7 (46.0%)	16 (30.2%)	8 (30.8%)	1.516	2	0.469
Fire/Burn Related Injuries	9 (60.0%)	14 (26.4%)	11 (42.3%)	6.298	2	**0.043***
Firearm Safety	4 (26.7%)	10 (18.9%)	10 (38.5%)	3.534	2	0.171
Motorcycle Injuries	3 (20.0%)	10 (18.9%)	11 (42.3%)	5.328	2	0.070
Motor Vehicle Accidents/Injuries	10 (66.7%)	31 (58.5%)	18 (69.2%)	0.977	2	0.613
Motor Vehicle Adult Passenger Safety	3 (20.0%)	18 (34.0%0	9 (34.6%)	1.170	2	0.557
Motor Vehicle Child Passenger Safety	3 (20.0%)	14 (26.4%)	10 (38.5%)	1.900	2	0.387
Motor Vehicle Impaired Driving	9 (60.0%)	25 (47.2%)	17 (65.4%)	2.569	2	0.277
Pedestrian Safety	6 (40%)	14 (26.4%)	7 (26.9%)	1.111	2	0.574
Personal Safety	14 (93.3%)	33 (62.3%)	17 (65.4%)	5.314	2	0.070
Poisonings	9 (60%)	16 (30.2%)	14 (53.8%)	6.541	2	**0.039***
Recreational and Sports Injuries	10 (66.7%)	26 (49.1%)	17 (65.4%)	2.658	2	0.265
Slips, Trips, and Falls	7 (46.7%)	14 (26.4%)	13 (50.0%)	5.054	2	0.080
Water Related Injuries	4 (26.7%)	10 (18.9%)	9 (34.6%)	2.387	2	0.303
Work Related Injuries	8 (53.3%)	12 (22.6%)	12 (46.2%)	7.253	2	**0.027***

*$p < 0.05$

Table 4: Chi Square Analysis of Course Content Areas by Type of Course

Content	Required	Elective	X^2	df	p Value
Bicycle Safety	10 (25%)	14 (29.2%)	0.191	1	0.662
Drowning	12 (30.0%)	14 (31.3%)	0.016	1	0.899
Fire/Burn Related Injuries	10 (25.0%)	21 (43.8%)	3.362	1	0.067
Firearm Safety	4 (10%)	17 (35.4%)	7.758	1	**0.005***
Motorcycle Injuries	4 (10%)	17 (35.4%)	7.758	1	**0.005***
Motor Vehicle Accidents/Injuries	22 (55.0%)	33 (68.8%)	1.760	1	0.185
Motor Vehicle Adult Passenger Safety	11 (27.5%)	15 (31.3%)	0.147	1	0.701
Motor Vehicle Child Passenger Safety	9 (22.5%)	14 (29.2%)	0.502	1	0.478
Motor Vehicle Impaired Driving	20 (50%)	28 (58.3%)	0.611	1	0.434
Pedestrian Safety	10 (25%)	14 (29.2%)	0.191	1	0.662
Personal Safety	30 (75%)	30 (62.5%)	1.571	1	0.210
Poisonings	13 (32.5%)	23 (47.9%)	2.145	1	0.143
Recreational and Sports Injuries	26 (65%)	22 (45.8%)	3.233	1	0.072
Slips, Trips, and Falls	16 (40.0%)	15 (31.3%)	0.732	1	0.392
Water Related Injuries	5 (12.5%)	15 (31.3%)	4.368	1	**0.037***
Work Related Injuries	14 (35.0%)	15 (31.3%)	0.139	1	0.709

* $p < 0.05$

Research Question 3

3. Does classroom delivery for teaching unintentional injury content areas in undergraduate personal health and wellness courses differ significantly based on demographic characteristics?

When asked about classroom delivery, the majority of participants reported that the course was delivered in lecture format (n=98), via an online course (n=30), in a seminar (n=10), and in a laboratory environment (n=10). Approximately 16 participants reported another form of classroom delivery method. Data is presented in Figure 3.

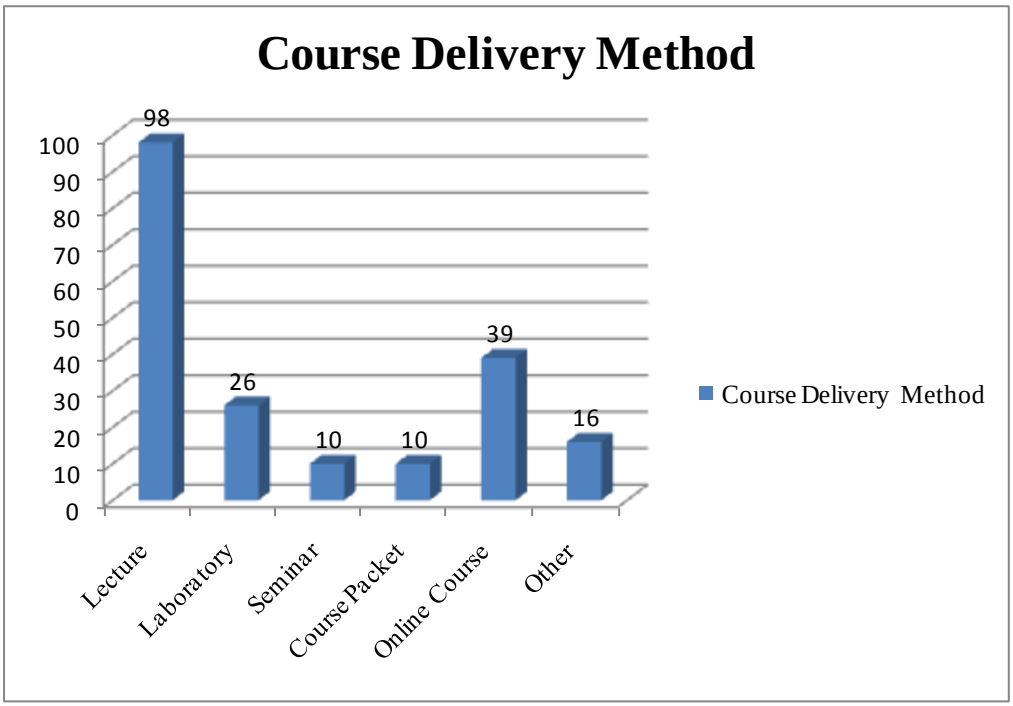

Figure 3: Course Delivery Method

A chi-square analysis was used to determine if school type, title or course type had a significant influence on the classroom delivery method. Results of the chi-square analysis are displayed in tables 5, 6, and 7.

Chi-square analysis results displayed in Table 5 reveal that private colleges/universities were significantly more likely to teach a seminar course (p=0.048) and an online course (p=0.015) when compared to public colleges/universities.

Chi-square results displayed in Table 6 indicated that there are no significant differences when comparing classroom delivery method to participant title.

Chi-square analysis results presented in Table 7 indicated that elective courses are significantly more likely to offer a laboratory (p=0.031) when compared to required courses.

Table 5: Chi-Square Analysis of Classroom Delivery Method by School Type

Classroom Delivery Method	**Public**	**Private**	**X^2**	**df**	**p Value**
Lecture	80 (94.1%)	17 (94.4%)	0.003	1	0.957
Laboratory	20 (23.5%)	6 (33.3%)	0.757	1	0.384
Seminar	6 (7.1%)	4 (22.2%)	3.896	1	**0.048***
Course Packet	7 (8.2%)	3 (16.7%)	1.205	1	0.272
Online Course	29 (34.1%)	1 (5.6%)	5.8770	1	**0.015***

* $p<0.05$

Table 6: Chi-Square - Classroom Delivery Method by Title

Classroom Delivery Method	Program Coordinator	Professor and Adjunct Professor	Instructor and Graduate Assistant/Associate	X^2	df	p Value
Lecture	14 (87.5%)	54 (93.1%)	30 (100.0%)	3.306	2	0.192
Laboratory	4 (25%)	19 (32.8%)	3 (10.0%)	5.462	2	0.065
Seminar	2 (12.5%)	5 (8.6%)	3 (10.0%)	0.224	2	0.894
Course Packet	1 (6.3%)	7 (12.1%)	2 (6.7%)	0.910	2	0.634
Online Course	5 (31.3%)	16 (27.6%)	9 (30%)	0.109	2	0.947

*p< 0.05

Table 7: Chi-Square Analysis of Classroom Delivery Method by Type of Course

Classroom Delivery Method	Required	Elective	X^2	df	p Value
Lecture	41 (91.1%)	52 (96.3%)	1.159	1	0.282
Laboratory	16 (35.6%)	9 (16.7%)	4.640	1	**0.031***
Seminar	3 (6.7%)	5 (9.3%)	0.222	1	0.637
Course Packet	4 (8.9%)	6 (11.1%)	0.133	1	0.715
Online Course	14 (31.1%)	16 (29.6%)	0.026	1	0.873

*p< 0.05

Research Question 4

4. Does the perception of "importance" for teaching content on unintentional injuries differ significantly based on demographic characteristics?

A factor analysis was used to determine how unintentional injury content areas correlated with each other. This helped to classify all unintentional course content areas into three categories: content related to injuries, personal safety, and motor vehicle safety. Factor analysis results are displayed in Table 9.

Factor analysis was used on the twenty-three course content areas listed in Table 8, this method was chosen to reduce these items into thematic groups. Extraction method was used along with principal components with a Varimax rotation. Three factor solutions were chosen because three eigenvalues were greater than 1.0 and all three were conceptually important. Eigenvalues are displayed in Table 8.

From the twenty-three course content areas, three main categories emerged. These categories included content related to injury, personal safety, and motor vehicle safety. To determine which of the three categories in Table 9 were rated as more important, a repeated measures ANOVA was used. Results from the repeated measures ANOVA indicated that participants ranked the following categories: 1) personal content, 2) motor vehicle content and 3) injury content. Content areas categorized under personal content included: The relationship between alcohol, drugs, and motor vehicle injuries; the relationship between using alcohol, drugs, and injuries; personal safety, motor vehicle driving under the influence of alcohol and drugs; the relationship between cell-phone use or text messages and motor vehicle injuries; and unintentional poisoning.

Content areas categorized under motor vehicle content included: Motor vehicle adult passenger safety, motor vehicle seat belt use, motor vehicle child passenger safety, and motor vehicle injuries. Content areas categorized under injury content included: Water-related injuries; slips, trips, falls among children and adolescents; injuries occurring at home, injuries occurring during recreational activities, drowning; slips, trips, and falls among adults, injuries occurring while at work, fire/burn related injuries, pedestrian safety; slips, trips, and falls among elderly; and motorcycle injuries.

Reliability measures were also calculated for the instrument questions related to unintentional injury course content. The following Cronbach Alphas were calculated: 0.971 for injury content, 0.915 for personal content, and 0.923 for motor vehicle content. The Cronbach Alphas calculated for this instrument indicated that the measures related to course content were highly reliable.

A repeated measures t-test was also used to analyze categories identified in factor analysis. The means of the three topics: injury content, personal content, and motor vehicle content were examined. All three means differed significantly. Mean results are presented in Table 10.

Table 8: Eigenvalues

Component	Total	% Variance	Cumulative%
1	13.968	60.728	60.728
2	2.960	12.870	73.598
3	1.012	4.399	77.997
4	0.795	3.457	81.454
5	0.656	2.853	84.307
6	0.513	2.230	86.537
7	0.440	1.914	88.451
8	0.430	1.868	90.319
9	0.356	1.546	91.865
10	0.307	1.335	93.199
11	0.267	1.162	94.362
12	0.227	0.986	95.348
13	0.160	0.696	96.044
14	0.152	0.661	96.705
15	0.133	0.578	97.283
16	0.109	0.472	97.755
17	0.106	0.459	98.215
18	0.092	0.399	98.614
19	0.088	0.382	98.996
20	0.072	0.314	99.310
21	0.063	0.272	99.581
22	0.051	0.222	99.803
23	0.045	0.197	100.00

Extraction Method: Principal Component Analysis

Table 9: Factor Analysis Revealing Related Component Matrix

Content Area	**Component**		
	1	**2**	**3**
Water-related injuries	0.862		
Slips, Trips, and falls among children and adolescents	0.860		
Injuries occurring at home	0.850		
Injuries occurring during recreational activities	0.832		
Drowning	0.811		
Slips, trips, and falls among adults	0.811		
Injuries occurring while at work	0.808		
Fire/burn related injuries	0.769		
Pedestrian safety	0.766		
Bicycle safety (i.e. use of helmet, road rules)	0.754		
Fire-arm safety	0.716		
Slips, trips, and falls among elderly	0.702		
Motorcycle injuries	0.668		
The relationship between alcohol, drugs, and motor vehicle injuries		0.927	
The relationship between using alcohol, drugs and injuries		0.923	
Personal safety (i.e. assault, date rape)		0.846	
Motor vehicle driving under the influence of alcohol and drugs		0.831	
The relationship between cell-phone use or text messaging and motor vehicle injuries		0.643	
Unintentional poisoning (i.e. drug abuse, ingestion of chemicals)		0.574	
Motor vehicle adult passenger safety			0.741
Motor vehicle seatbelt use			0.693
Motor vehicle child passenger safety			0.692
Motor vehicle injuries (accidents)			0.662

Table 10: Means for Indentified Content Areas

Content Measure	**Mean**	**Std. Dev.**
Personal Content	4.445	0.747
Motor Vehicle Content	4.020	1.007
Injury Content	3.474	1.006

Research Question 5

5. Does the perception of teaching unintentional injuries differ significantly based on demographic characteristics?

To determine if the perception of teaching unintentional injuries differs significantly based on selected demographic characteristics, a MANOVA was used to examine the six perception questions listed in the survey at one time. Results indicated that there were no differences in perceptions based on selected demographic characteristics: type of school $F(7, 78) = 1.866$, $p = 0.087$; title of participants $F(14, 154) = 0.582$, $p = 0.876$; and elective/required courses $F(7,72) = 1.430$, $p=0.207$.

Table 11:

Data displayed in Table 11 displays mean values related to instructor perception questions. Mean values indicated that instructors agreed that it is important to teach and emphasize unintentional injury content in undergraduate personal health and wellness courses. They also reported that it was important to place an emphasis on strategies to prevent unintentional injuries within undergraduate personal health and wellness courses. Participants were neutral when asked if it was important to teach all areas related to unintentional injuries. Participants disagreed when asked if they were not comfortable teaching about unintentional injuries.

Table 11: Mean Values for Participant Perception Questions

Question	N	Minimum	Maximum	Mean	Std. Deviation
I think it is important to address unintentional injury prevention in undergraduate personal health and wellness course.	86	2	5	4.29	0.717
I think it is important to place an emphasis on unintentional injuries in my undergraduate personal health and wellness course.	86	2	5	3.93	0.968
I think it is important to place an emphasis on strategies to prevent unintentional injuries within my undergraduate personal health and wellness course.	86	2	5	4.12	0.818
I think it is important that the textbook or printed materials that I use adequately covers unintentional injuries.	86	2	5	3.97	0.874
I think it is important to teach about all areas of unintentional injury.	86	1	5	3.51	1.135
I am not comfortable teaching about unintentional injuries.	86	1	5	1.98	1.246

Summary

Chapter 4 presented the analysis and interpretation of data collected from the survey concerning unintentional injury course content in undergraduate personal health and wellness courses. Data was collected from 106 participants representing colleges and universities in 36 states. Demographic and descriptive information about the participants was also provided.

Data analysis indicated that significant differences existed based on the demographic characteristics of type of school (pubic or private), the type of course (required or elective) and participant title (program coordinator, professor, adjunct professor, instructor, graduate teaching assistant/associate). Factor analysis results indicated that out of the 23 course content areas related to unintentional injury participants ranked course content areas similarly, regardless of demographic factors. From these 23 course content areas, three groups were identified. These groups included personal content, motor vehicle content, and injury content. Results also indicated that there were no differences in participant perceptions based on selected demographic factors. Chapter 5 will present findings, conclusions, and recommendations.

CHAPTER V

FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

The purpose of this chapter is to summarize the findings, conclusions, and recommendations resulting from the self-reported survey responses of personal health and wellness instructors in undergraduate health education programs identified in the *Eta Sigma Gamma* Directory. Course content areas and perceptions pertaining to the teaching of unintentional injuries was assessed by demographic characteristics. These characteristics included title of participant, if the course was required or an elective, and the type of school surveyed, public or private. The completion of this survey was to provide the researcher with a baseline of information pertaining to course content related to unintentional injuries. Participants included in this study represented 36 states across the United States of America.

The data analyzed in this study were from participants working in higher education institutions with undergraduate health education programs identified in the *Eta Sigma Gamma* Directory. This analysis was conducted using descriptive statistics, ANOVA, chi-square analysis, and factor analysis to examine unintentional injury course content areas and participant's perceptions related to unintentional injuries.

Findings

Instrument Development

An Instrument entitled "Unintentional Injury Content Assessment in Undergraduate Personal Health and Wellness Courses" was created and validated to

provide baseline information pertaining to unintentional injury course content and participant perceptions pertaining to the importance of teaching about unintentional injuries. An expert content validation panel was utilized to obtain data necessary to establish content validity.

The experts serving on the content validation panel were asked to respond to the instrument, ensure that the instrument addressed issues relevant to unintentional injury content within undergraduate personal health and wellness courses, and ensure that the instrument was easy to read/understand. Due to the topics outlined in the instrument, reliability was calculated for only those questions with psychometric properties. Chronbach's Alpha of 0.971 (injury content), 0.915 (personal content), and 0.923 (motor vehicle content) were reported for the questions measuring instructor perception of course content area. Chronbach's Alpha helped to establish item correlation within the course content survey section.

Survey Administration

Responses to the instrument represented 106 out of a possible 223 participants. A response rate of 47.5% was achieved. The instrument was administered from October through November 2009. After an initial e-mail was sent to participants soliciting participation, three follow-up e-mails were sent.

Demographics

Participants self-identified in the following manner: Professors (n=50), instructors (n=15), graduate teaching associates (n=15), program coordinators (n=11), adjunct faculty members (n=10) and professor/administrative positions (n=5). The

majority of participants (80%) worked at a four year state college/university while 14.2 percent identified working at a four year private college/university. Respondents represented 106 colleges/universities in 36 states across the United States of America.

Research Question 1

Which undergraduate personal health and wellness course content areas related to unintentional injuries are taught at four year pubic and private colleges and universities?

The top five course content areas related to unintentional injuries included: water-related injuries (n=71), firearm safety (n=70), motorcycle injuries (n=70), motor vehicle passenger safety (n=67), motor vehicle impaired driving (drugs and alcohol) (n=67). Motor vehicle accidents/injuries (n=35) was least likely to be taught by participants. Results also indicated that 87.2% of participants indicated that they covered topics not identified by the survey. The areas not addressed by the survey included contraceptive use, personal health and wellness, nutrition, fitness, psychological health, intentional injuries, drinking and tobacco use. When applied to Social Cognitive Theory, this suggests that the participants are teaching content related to unintentional injuries within the context of the classroom environment.

Research Question 2

Do content areas related to unintentional injuries differ significantly based on demographic characteristics?

According to the data analysis, public schools were significantly more likely to cover drowning (p=0.056) and poisoning (p=0.043) when compared to private schools. Data also revealed that instructors and graduate teaching assistants/associates were significantly more likely to cover bicycle safety (p=0.043) when compared to

professors/adjunct professors and program coordinators. Analyses also indicated that program coordinators were significantly more likely to cover fire/burn related injuries (p=0.043) and work-related injuries (p=0.027) when compared to professors/adjunct professors and instructors/graduate teaching assistants/associates. Professors/adjunct faculty members were significantly more likely to cover poisonings (p=0.039) when compared to instructors/graduate teaching assistants/associates and professors/adjunct professors. In the context of the classroom environment, participants reported teaching about specific types of unintentional injury course content.

When comparing the type of course (elective or required), data analysis revealed that elective courses were significantly more likely to cover firearm safety (p=0.005), motorcycle injuries (p=0.005), and work-related injuries (0.037) when compared to required courses.

Research Question 3

Does classroom delivery for teaching unintentional injury content areas in undergraduate personal health and wellness courses differ significantly based on demographic characteristics?

Data analysis revealed that the majority of participants reported that the preferred course delivery format was lecture (n=98). Respondents also indicated that online courses (n=30), seminars (n=10) and laboratories (n=10) were used to convey information in undergraduate personal health and wellness courses pertaining to unintentional injuries.

Results indicated that private colleges/universities were significantly more likely to teach a seminar course (p=0.048) and an online course (p=0.015) when compared to public colleges/universities. Data also revealed that when offered, elective courses were

significantly more likely to incorporate a laboratory (p=0.031) when compared to required courses. These results are further substantiated by the Social Cognitive Theory in that classroom delivery format is part of the overall classroom environment, capable of influencing individuals and their behavior.

Research Question 4

Does the perception of "importance" for teaching content on unintentional injuries differ significantly based on demographic characteristics?

Factor analysis results indicated that participants rated 23 course content areas that could be divided into three distinct categories: Injury content, personal content, and motor vehicle content. ANOVA analysis results indicated that respondents ranked these three areas in order of importance: 1) Personal content, 2) Motor vehicle content and 3) Injury content. Based on the five point scale, these results indicate that participants ranked personal content as very important, motor vehicle content as important, and injury content as somewhat important.

Because questions regarding instructor perception of importance as it related to course content revealed psychometric properties, reliability measures were calculated. Chronbach's Alphas were calculated: 0.915 for personal content, 0.923 for motor vehicle content, and 0.971 for injury content. Chronbach's Alpha can be used to measure the extent to which survey questions correlate with other questions presented in the same section. For an item to be considered reliable, a Chronbach Alpha of 0.70 is required.

Research Question 5

Does the perception of teaching unintentional injuries differ significantly based upon demographic characteristics?

Results indicated that there was no significant difference in respondent perceptions based on selected demographic characteristics: type of school, title of participants, and elective/required courses. Participants reported that they were comfortable teaching content related to unintentional injuries. When applied to the Social Cognitive Theory, this suggests that an individual can influence the overall classroom environment by teaching about unintentional injuries.

Conclusions

The following conclusions may be drawn from this research study:

The newly developed and validated instrument entitled "Unintentional Injury Course Content Assessment in Undergraduate Personal Health and Wellness Courses" was found to be both valid and reliable. This study revealed that schools with undergraduate health education programs offer personal health and wellness courses as both elective and required courses. Undergraduate health education programs at both public and private colleges/universities identified teaching unintentional injury content areas in undergraduate personal health and wellness courses. A review of personal health textbooks used in undergraduate personal health and wellness courses have content similar to the topics covered in the validated instrument. The jury of experts supported the selected content areas.

This study also revealed that out of the 23 unintentional course content areas listed, respondents perceived the "importance" of topics similarly, rating areas in the following order: 1) personal content, 2) motor vehicle content, and 3) injury content. Based on mean scores, respondents identified the three content areas as: 1) personal content – very important, 2) motor vehicle content – important, and 3) injury content –

somewhat important. Regardless of the demographic characteristics, respondents identified three content areas similarly. A review of related literature on specific injury-related topics cited in Chapter II coincides the with findings and conclusions from this research.

Also, results from this study indicated that regardless of demographic characteristics, respondents felt that teaching about unintentional injuries is important. Gielen, Sleet and DiClemente (2006) reported that by 2020, injuries will be the third cause of death world-wide.

Recommendations

Based upon experiences gained from this study, the following recommendations are offered for future research.

1. Colleges and universities that offer personal health and wellness courses for undergraduate health education programs need to focus on the specific types of unintentional injuries and injury prevention. More consistency is needed based upon the needs of the population.
2. Validation of subtopics is needed for each of the three content areas identified by the survey. These areas include personal content, motor-vehicle content and injury content.
3. Future research efforts are needed for course content areas and student perceptions on unintentional injuries and injury prevention using a modified instrument based on unintentional injury content areas.
4. Research is needed in investigating the effectiveness of the course delivery method of instruction on unintentional injury content areas.

Summary

This chapter discussed findings, conclusions, and recommendations generated by the study. Most higher education institutions with undergraduate programs in health education offer courses in personal health and wellness. Additional research focusing on the prevention of unintentional injuries and the student's perception of unintentional injuries are needed to gain further insight into the instruction offered to undergraduate students.

CHAPTER VI

THE STUDY IN RETROSPECT

Purpose

The purpose of this study was to investigate and profile course content areas on unintentional injuries in undergraduate personal health and wellness courses at four year public and private colleges and universities identified by the *Eta Sigma Gamma* directory for the United States.

Importance of the Study

Over 12 million students are currently enrolled in the nation's 3,600 universities and colleges (National Center for Education Statistics, 2005). For this population, unintentional injuries are the leading cause of death for young adults aged 15 to 34 years of age (CDC, 2004). This study served to collect baseline information regarding course content areas related to unintentional injuries in undergraduate personal health and wellness courses. The literature review conducted revealed a lack of content on unintentional injuries within undergraduate personal health and wellness courses. The goal of this study was to determine if participants were teaching undergraduate students about unintentional injuries. If instruction was given, what topics are being covered? The literature also revealed limited research studies concerning unintentional injuries within the college population. Until now, studies on injuries have focused on the frequency of risky-behaviors. These studies have been large-scale studies where students were asked to participate (American College Health Association, 2004). This study is unique because the participants included those individuals responsible for teaching

personal health and wellness courses. In community health, education is integral to prevention. How can we expect fatalities due to unintentional injuries to decrease without educating students about the different content areas related to unintentional injuries? Therefore, the personal health and wellness course of study needs to reflect the prevalence, cost, and disability related to unintentional injuries. These courses also need to teach students about common vernacular associated with unintentional injuries, including terms and definitions. Recently, a nominal group process was conducted in an undergraduate personal health and wellness course in which students identified the top three unintentional injury areas of concern. Results from this nominal group process indicated that students perceived stalking, personal attacks, and walking to one's car as areas of concern. This further demonstrated the need for common terminology and understanding about unintentional injuries.

Observations about the Study

When considering that unintentional injuries are the leading cause of death for college-aged individuals, it is important to consider if the topic of unintentional injuries is being addressed within undergraduate personal health and wellness courses. While much research is designated to the intentional (rape, homicide, etc.) injuries, little research has been conducted regarding unintentional injuries. In 2009, the Centers for Disease Control and Prevention named unintentional injury prevention as priority topics for 2009-2018. These topics include: home, community, sports and recreation, exercise, and transportation related to unintentional injuries. As a researcher, one would hope that the 2020 Healthy People document would give attention to the college-aged population and unintentional injuries. If anything, this study has revealed that those who teach

undergraduate personal health and wellness courses are teaching students topics pertaining to unintentional injuries. Additionally, university faculty who participated in the study have identified that they felt that it is important to teach unintentional injury content within their personal health and wellness course.

Implications for Preparing Health Instructors

While most textbooks include chapters pertaining to injuries, little information is included about content areas related to unintentional injuries when compared to intentional injuries. It is important for programs preparing future health educators to bring awareness about the prevalence of unintentional injuries. The content areas associated with unintentional injuries are activities that most college students participate in on a regular basis such as motor vehicle and bicycle usage and personal safety. In preparing future health educators, it is important that real-world statistics and activities be used related to unintentional injury prevention. Examples of relevant methods would include inviting law enforcement to the classroom, student observations of their home, work, and campus risks, and interviewing persons in the community responsible for reducing unintentional injuries within the community.

Implications for Personal Health Courses

The researcher has taught personal health and wellness courses for more than six years. The implications of this study are significant for personal health and wellness courses. If unintentional injuries are the leading cause of death among college-aged individuals, it is important that textbooks for these courses cover all aspects and content areas related to unintentional injuries. A follow-up study for this research would include

a review of textbooks used in personal health and wellness courses to examine the content related to the prevention of unintentional injuries.

Implications for Health Education

The prevention of unintentional injuries is vital to the field of health education. Since unintentional injury prevention is now a research priority for the Centers for Disease Control and Prevention, it is hopeful that more research will be conducted in this area. More instruction is needed within college and university settings to decrease fatalities and disabilities related to unintentional injuries among young adults. Programs offering courses in personal health and wellness need to focus on practical examples to get students involved in the learning process. Educating students about health and prevention involves more than lecturing; it involves integrating real-world examples and problem solving situations.

Student health centers can also become involved in educating students about unintentional injuries. These centers, which see the majority of students on college campuses, are vital to the educational process. Since most college students are active and involved in recreational activities such as bicycling, running, and sports, it is important that campus health services monitor and educate students about injuries related to these activities.

The implications are vast for the role of unintentional injury education in health education. More research is needed on the perceptions of young-adults related to unintentional injuries, the prevalence and types of unintentional injuries, and terminology and universal definitions related to unintentional injuries.

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APPENDICES

APPENDIX A: UNIVERSITY IRB LETTER

SEP 1 2009

FORM A

Certification for Exemption from IRB Review for Research Involving Human Subjects

A. **PRINCIPAL INVESTIGATOR(s) and/or CO-PI(s)** (For student projects, list both the student and the advisor.):

Kiley E. Winston, MS, MPH, CHES
Principal Investigator

June Gorski, DrPH, CHES
Professor and Faculty Advisor

B. **DEPARTMENT:** Department of Nutrition

C. **COMPLETE MAILING ADDRESS AND PHONE NUMBER OF PI(s) and CO-PI(s):**

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HPER 390
Knoxville, TN 37996

D. **TITLE OF PROJECT:** Unintentional Injury Content Assessment in Undergraduate Personal Health and Wellness Courses

E. **EXTERNAL FUNDING AGENCY AND ID NUMBER** (if applicable): N/A

F. **GRANT SUBMISSION DEADLINE** (if applicable): N/A

G. **STARTING DATE** (NO RESEARCH MAY BE INITIATED UNTIL CERTIFICATION IS GRANTED.):
Upon IRB approval

H. **ESTIMATED COMPLETION DATE** (Include all aspects of research and final write-up.): December 2010

I. **RESEARCH PROJECT**

1. **Objective(s) of Project** (Use additional page, if needed.):

Objectives for this project include:

1) Develop and administer an instrument that profiles how unintentional injuries are addressed within undergraduate personal health and wellness courses.
2) Collect and analyze self-reported responses from instructors of personal health and wellness courses at four year colleges and universities across the United States.

2. **Subjects** (Use additional page, if needed.):

Subjects who will be requested to participate in the survey will include personal health and wellness instructors at four year colleges and universities located throughout the United States. The institutional affiliation of respondents will be kept confidential. Individuals participating in the study will be over the age of twenty-one years and will be contacted via e-mail for study participation. The instrument will be employed online. To ensure anonymity, participant names will not be collected. Responses to all online surveys will be kept in a secure location, a locked cabinet in the researcher's office, 379 HPER.

3. Methods or Procedures (Use additional page, if needed.):

The following methods will be used to collect survey information:

1) The researcher will obtain information regarding four year colleges and universities located throughout the United States via the Eta Sigma Gamma directory. Eta Sigma Gamma is the National Health Science Honorary and the directory provides information pertaining to departments and instructors offering instruction in undergraduate health education programs in the United States.
2) Program coordinators and instructors from colleges and universities will be contacted via email about their willingness to participate in the study. Materials including the survey, instructions, and informed consent will be emailed to participants.
3) Instructors will be asked to complete the online survey. Survey responses will be confidential and anonymous.
4) Two weeks after the initial email distribution, a follow up email will be sent by the researcher to instructors. This will provide an additional reminder for instructors to complete the survey.
5) Participants will be encouraged to contact the researcher with any questions or concerns about the research project or survey. Contact numbers will be provided with the survey instructions and informed consent.

Participant completion of this survey will be voluntary and responses will remain anonymous and confidential. Final survey results will be kept in a locked cabinet in the researcher's office (HPER 379) at the University of Tennessee Health and Physical Education/Recreation building. The completion of the survey will serve as consent for participation in the research project. Completed surveys will not have an individual identification locator number or name. Completed survey data will be entered directly into the Statistical Program for Social Sciences (SPSS). Data will be analyzed using the Statistical Program for Social Statistics (SPSS). The data obtained from the survey will be used for completing a dissertation and for developing manuscripts for possible publication..

4. CATEGORY(s) FOR EXEMPT RESEARCH PER 45 CFR 46 (See instructions for categories.):

This project should receive exempt status because the research uses a self-reported survey with a design that ensures confidentiality and requires no names, social security numbers, or other forms of identification. The data that is gathered will be recorded in a manner that no participant will be identified and only aggregate data will be reported.

J. CERTIFICATION: The research described herein is in compliance with 45 CFR 46.101(b) and presents subjects with no more than minimal risk as defined by applicable regulations.

Principal Investigator: Kiley Winston (Name) Kiley Winston (Signature) 8·27·09 (Date)

Student Advisor: [illegible] (Name) [illegible] (Signature) 8·27·09 (Date)

Department Review Committee Chair: Michael Zenel (Name) [illegible] (Signature) 8/28/09 (Date)

APPROVED:
Department Head: [illegible] (Name) Jay Whelan (Signature) 8/28/09 (Date)

COPY OF THIS COMPLETED FORM MUST BE SENT TO COMPLIANCE OFFICE IMMEDIATELY UPON COMPLETION.

APPENDIX B: VALIDITY LETTER AND SURVEY

Unintentional Injury Content Assessment in

Undergraduate Personal Health and Wellness Courses

Dear College/University Health Instructor,

Your assistance is requested to complete this survey. The survey will be used to collect information on unintentional injury content areas within undergraduate personal health and wellness courses. Your contribution is valued and appreciated.

By completing the attached survey, information gathered will be used to profile how unintentional injuries are addressed within college health courses. Information provided will be used to make recommendations pertaining to injury prevention in undergraduate personal health and wellness courses.

This survey will take approximately 10 minutes to complete. For your responses, please use the survey form that is provided. Your participation is voluntary and anonymous. Your consent to participate in the research study is obtained by your completion and return of the survey instrument. Please complete the instrument no later than October 2, 2009.

Thank you for your time and response. If you have any questions concerning this survey, please contact the Primary Investigator, Kiley Winston at (865) 974-4215 or

(678) 428-5084.

Sincerely,

Kiley E. Winston, MS, MPH, CHES

Primary Investigator

Doctoral Student in Community Health

Department of Nutrition

University of Tennessee, Knoxville

Expert Content Validation Panel Questionnaire

Directions: Please complete the following questions as they pertain to the "*Unintentional Injury Content Assessment in Undergraduate Personal Health and Wellness Courses*." You may write/make suggestions directly on the instrument. When completed, please place questionnaire and instrument in the self-addressed, stamped envelope included in the packet. Thank you.

1. Does the instrument adequately address unintentional injury course content within undergraduate Personal Health and Wellness courses?

2. Which questions, if any, were difficult to understand? Why?

3. Which questions, if any, were unclear in the way the response options were stated?

4. Which words, if any, were difficult to understand?

5. How long did it take you to respond to the instrument questions?

6. What suggestions would you make to improve the instrument? (Please list specific changes to the instrument)

Thank you for your time to comment on this instrument for unintentional injury course content for Personal Health and Wellness courses.

APPENDIX D: FINAL SURVEY INSTRUMENT

Unintentional Injury Content Assessment in Undergraduate Personal Health & Wellness Courses

Instructions: Please fill out all survey questions honestly and to the best of your ability. Check the appropriate response or type a response into the box for open ended statements. Your responses will remain anonymous. This survey will take approximately 10 minutes to complete. Completion of this survey indicates your response to participate. Thank you for your participation.

CONSENT

I have read and agree to particiapte in this study.

- ○ Yes, I wish to continue
- ○ No, I wish to not continue

EMPLOY

Where are you currently employed?

- ○ 4 year state college or university
- ○ 4 year private college or university
- ○ 4 year independent – religious college or university
- ○ Other : _____

HOURS

Is your college or university on a Quarter or Semester system?

- ○ Semester
- ○ Quarter

SIZE

Approximately how large is your college/university?

- ○ Less than 2,000 students
- ○ 2,001 – 5,000 students
- ○ 5,001 – 10,000 students
- ○ 10,001 – 15,000 students
- ○ 15,001 – 20,000 students
- ○ More than 20,001 students

STATE

Where is your college/university located?

- ○ Please specify:
- ○ Alabama
- ○ Alaska
- ○ Arizona
- ○ Arkansas
- ○ Claifornia
- ○ Colorado
- ○ Connecticut
- ○ Delaware
- ○ Florida
- ○ Georgia
- ○ Hawaii
- ○ Idaho
- ○ Illinois
- ○ Indiana
- ○ Iowa
- ○ Kansas
- ○ Kentucky
- ○ Louisiana
- ○ Maine
- ○ Maryland
- ○ Massachusetts
- ○ Michigan
- ○ Minnesota
- ○ Mississippi
- ○ Missouri
- ○ Montana
- ○ Nebraska
- ○ Nevada
- ○ New Hampshire
- ○ New Jersey
- ○ New Mexico
- ○ New York
- ○ North Carolina
- ○ North Dakota
- ○ Ohio
- ○ Oklahoma
- ○ Oregon
- ○ Pennsylvania
- ○ Rhode Island
- ○ South Carolina
- ○ South Dakota

- ○ Tennessee
- ○ Texas
- ○ Utah
- ○ Vermont
- ○ Virginia
- ○ Washington
- ○ Wisconsin
- ○ Wyoming

TITLE

Which title best describes your current position at the institution where you work?

- ○ Program Coordinator
- ○ Professor
- ○ Adjunct Faculty
- ○ Instructor
- ○ Graduate Teaching Assistant/Associate
- ○ Other : _____

OFFERED

Is an undergraduate personal health and wellness course (a general introductory health course) currently offered at least once a year at your college or university?

- ○ Yes
- ○ No
- ○ Unknown

REQUIRED

Is the undergraduate personal health and wellness course (a general introductory health course) required for all discipline majors at your college/university or is it offered as an elective?

- ○ Required
- ○ Elective
- ○ Unknown

PAGE

DEPT_TITLE

Please print the name of the department responsible for administering the course and the course title.

Department Name:

_____
_____
_____
_____

COURSE_TITLE

Course Title(s):

_____
_____
_____
_____

DELIVERY

What are the typical types of classroom delivery for the Personal Health and Wellness course offered at your college/university? (Choose all that apply)

- ☐ Lecture
- ☐ Laboratory
- ☐ Seminar
- ☐ Course packet developed by instructor
- ☐ Online course
- ☐ Other, please specify : _____

PAGE1

BOOK_TITLE

What textbook is currently being used for the Personal Health and Wellness course?

Title of Textbook:

_____
_____
_____
_____

BOOK_AUTHOR

Author:

_____

_____

_____

_____

BOOK_PUBLISHER

Publisher:

_____

_____

_____

_____

PHW_HOURS

How many credit hours are assigned to the personal health and wellness course at your institution? Please write the number in the appropriate space.

{#Hours} Hours

(0 - 255)

INJURY_HOURS

How many class hours per semester or per quarter do you estimate you spend teaching about unintentional injuries in a typical undergraduate personal health and wellness course? Please write the number in the appropriate space.

Approximate hours per {#Hours}

(0 - 255)

WHYNOT

If a Personal Health and Wellness course is NOT offered at your college/university, in your opinion why is it not offered?

_____

_____

_____

_____

APPROVED

Is the undergraduate health education program at your institution approved by AAHE/SOPHE?

- ○ Yes
- ○ No
- ○ In Process
- ○ Don't know

ACCREDITED2

Is the undergraduate health education program accredited?

- ○ Yes. Please specify accrediting body: :

_____

- ○ No
- ○ In process
- ○ Unknown

OFFER_INJURY

Does your college or university offer a specialization, academic track, or concentration in unintentional injury prevention?

- ○ Yes
- ○ No
- ○ Unknown

PAGE2

INJURY_TRACK

Name of Unintentional Injury Specialization, Academic Track of Concentration:

_____

_____

_____

_____

INJURY_DEPT

Department, Division, and/or Administrative Unit:

_____

_____

_____

_____

TEACH_YEARS

Approximately how long have you taught courses on Personal Health and Wellness?

- ○ less than 6 months
- ○ 6 months to 1 year
- ○ 1 year to 3 years
- ○ 3 years to 5 years
- ○ Over 5 years

EDUC

What is your highest academic degree?

- ○ PhD
- ○ EdD
- ○ DSc
- ○ MPH
- ○ MED
- ○ MS
- ○ Other : _____

MAJOR

What was the area of study and major or concentration for the academic degree you received?
Please specify

_____

_____

_____

_____

TOPICS

Please check as many of the following listed topics that are related to unintentional injuries covered in your Personal Health and Wellness course.

- ☐ Bicycle safety
- ☐ Drowning

- ☐ Fire/burn related injuries
- ☐ Firearm safety
- ☐ Motorcycle injuries
- ☐ Motor vehicle accidents/injuries
- ☐ Motor vehicle adult passenger safety
- ☐ Motor vehicle child passenger safety
- ☐ Motor vehicle – impaired driving (drugs and alcohol)
- ☐ Pedestrian safety
- ☐ Personal safety
- ☐ Poisonings
- ☐ Recreational and sports injuries
- ☐ Slips, trips and falls
- ☐ Water-related injuries
- ☐ Work-related injuries
- ☐ Other: : _____

CONTENT

Please indicate how important it is to teach the following course content areas.

	Not important at all	Slightly important	Somewhat important	Important	Very important
Motor vehicle injuries (accidents)	○	○	○	○	○
Motor vehicle adult passenger safety	○	○	○	○	○
Motor vehicle seatbelt use	○	○	○	○	○
Motor vehicle child passenger safety	○	○	○	○	○
Motorcycle injuries	○	○	○	○	○
Motor vehicle Driving under the influence of alcohol and drugs	○	○	○	○	○
Slips, trips and falls among children and adolescents	○	○	○	○	○
Slips, trips, and falls among adults	○	○	○	○	○
Slips, trips, and falls among the elderly	○	○	○	○	○
Unintentional poisoning (i.e. drug abuse, ingestion of chemicals)	○	○	○	○	○
Water-related injuries					

	○	○	○	○	○
Drowning	○	○	○	○	○
Fire/burn-related injuries	○	○	○	○	○
Fire-arm safety	○	○	○	○	○
Pedestrian safety	○	○	○	○	○
Bicycle safety (i.e. helmet use, road rules)	○	○	○	○	○
Personal safety (i.e. assault, date rape)	○	○	○	○	○
The relationship between using alcohol, drugs, and injuries	○	○	○	○	○
The relationship between alcohol, drugs, and motor vehicle injuries	○	○	○	○	○
The relationship between cell-phone use or text messaging and motor vehicle injuries	○	○	○	○	○
Injuries occurring during recreational activities	○	○	○	○	○
Injuries occurring at home	○	○	○	○	○
Injuries occurring while at work	○	○	○	○	○

PERCEPT

Please indicate to the best of your ability whether you agree or disagree with the following statements.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I think it is important to address unintentional injury prevention in an undergraduate personal health and wellness course.	○	○	○	○	○
I think it is important to place an emphasis on unintentional injuries in my undergraduate personal health and wellness course.	○	○	○	○	○
I think it is important to place an emphasis on strategies to prevent					

unintentional injuries within my undergraduate personal health and wellness course?	○	○	○	○	○
I think it is important that the text book or printed materials that I use adequately covers unintentional injuries.	○	○	○	○	○
I think it is important to teach about all areas of unintentional injury.	○	○	○	○	○
I am not comfortable teaching about unintentional injuries.	○	○	○	○	○
I think it is important to require written assignments on unintentional injuries.	○	○	○	○	○

ASSIGNMENTS

In a personal health and wellness course, what type of community-based assignments do you offer for students studying about unintentional injuries?

_____

_____

_____

_____

COMMENTS

Thank you for completing the survey.

Additional comments (optional):

_____

_____

_____

_____

APPENDIX E: DATA ANALYSIS BY RESEARCH QUESTION

Data analysis by research question

Research Question	Domain	Question Response	Type of data	Statistical Tests
1. What are the undergraduate personal health and wellness course content areas related to unintentional injuries that are taught in four year public and private colleges and universities?	Question # 14 Bicycle safety Drowning Fire/Burn-related injuries Firearm safety Motor vehicle Accidents/Injuries Motor vehicle passenger safety Motor vehicle child passenger safety Motor vehicle-impaired driving Pedestrian safety Personal safety Poisonings Recreational and sports safety Slips, trips, and falls Water-related injuries Work-related injuries Other:_____	Check all that apply	Nominal	Descriptive Frequency distributions
3. Does personal health and wellness course content related to unintentional injuries differ significantly between four year public and private colleges and universities?	**Question # 1** Where are you currently employed? **Question #14** Bicycle safety Drowning Fire/Burn-related injuries Firearm safety Motor vehicle Accidents/Injuries	Check all that apply	Nominal	Chi Square

	Motor vehicle passenger safety Motor vehicle child passenger safety Motor vehicle-impaired driving Pedestrian safety Personal safety Poisonings Recreational and sports safety Slips, trips, and falls Water-related injuries Work-related injuries Other:_____			
4. Does classroom format for teaching unintentional injury content areas in undergraduate personal health and wellness courses differ significantly between four year public and private colleges and universities?	**Question # 1** Where are you currently employed? **Question # 10** If a personal health and wellness course is offered at your college/university, check the typical classroom format.	Check all that apply	Nominal	Chi Square
5. Does the perception of "importance" for teaching content on unintentional injuries differ	**Question # 1** Where are you currently employed? **Question # 36-38** 36. It is important to	Likert Scale	Ordinal	Anova Manova

significantly between four year public and private colleges and universities?	address unintentional injuries in an undergraduate personal health and wellness course. 37. I place an emphasis on **unintentional injuries within the college population** in my undergraduate personal health and wellness course? 38. I place an emphasis on strategies to prevent **unintentional injuries** within my undergraduate personal health and wellness course?			
5. Does the frequency of teaching course content areas are on unintentional injuries differ significantly between four year public and private colleges and universities?	**Question # 1** Where are you currently employed **Questions #15-35** Motor vehicle injuries (accidents) Adult passenger safety Seatbelt use Child passenger safety Driving under the influence of alcohol and drugs Slips, trips, and falls among children and adolescents Slips, trips, and falls among adults Slips, trips, and falls among the elderly Unintentional poisoning	Likert Scale	Ordinal	Anova Manova

	Water-related injuries Drowning Fire-related injuries Recreational injuries Pedestrian safety Bicycle safety Personal safety The relationship between using alcohol, drugs and injuries The relationship between alcohol, drugs, and motor vehicle accidents (injuries)			

VITA

Kiley Elizabeth Winston grew up as an Army dependent. She was born in Enterprise, Alabama, graduated high school in Hanau, Germany in 2000, and graduated from the University of Alabama with a Bachelor of Science degree in Psychology in 2004.

After her undergraduate studies, Kiley attended Georgia Southern University in 2004 to complete studies toward a Master in Public Health degree with a concentration in Community Health Education. While at Georgia Southern, she taught Kinesiology and Personal Health and Wellness courses. This started her interest in health education within a university setting. She graduated with her MPH degree in December of 2006. While at Georgia Southern University, Kiley conducted her Master's thesis on body dissatisfaction and body image perceptions in sorority and non-sorority women. Additionally, she was asked to take a summer faculty position at St. Benedict's Catholic School and Performing Arts College where she taught health and physical education and researched healthy eating among adolescents attending the school.

In the fall of 2006, Kiley was accepted into the Master in Safety Management program at the University of Tennessee and was awarded a graduate teaching assistantship. In December of 2007, she received her Master of Science degree in Safety Management while continuing to work toward her PhD degree; in 2007 she passed the national examination to become a Certified Health Education Specialist (CHES). While working on her PhD in Health and Human Sciences, Kiley taught both Personal Health and Wellness and Advanced First Aid and Emergency Care in the Department of

Instructional Technology, Health, and Cultural Studies and the Department of Nutrition. Additionally, she worked part-time at Energy Solutions in Oak Ridge Tennessee as a Safety Associate. While at Energy Solutions, Kiley was responsible for developing, implementing and maintaining their Voluntary Protection Program. The process for program acceptance included an onsite OSHA inspection and employee interviews. In 2008, Energy Solutions was awarded by the Tennessee Occupational Health and Safety Association as a Volunteer Star Site. At the time, only 13 companies within the state of Tennessee had received such recognition. The award recognition was important to Kiley's professional development because she integrated her education in safety and unintentional injury prevention in a practical manner that benefited a local industry.

Kiley has also worked as a consultant for EG & G Technical Services Inc. and the Department of Homeland Security as a full-scale emergency management exercise controller. She has presented at local, state and national conferences on the topics of health, safety and unintentional injuries. Conferences where Kiley presented include: Phi Kappa Phi, the Conference of the Popular Culture Association of the South and the American Culture Association of the South, the Southern College Health Association, the Tennessee Public Health Association, and the National Safety Council.